Before The
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:	)	
	)	
The Amendment of Part 97 of the Commission's Amateur Radio Service Rules to Permit Greater Flexibility in Data Communications	)	WT Docket No. 16-239
	)	
	)	RM-11708
By: Bayard R. Coolidge, licensee, Amateur Radio Station N1HO	)	
	)	

1. Introduction

This licensee wholeheartedly supports the Commission's proposal as well as the comments filed by the Amateur Radio Safety Foundation, Inc. (ARSFI).

2. Background

I earned my Novice class license (WN2HHO) in 1968, and upgraded to General Class (WA2HHO) in 1969, Advanced Class in 1970, and Extra Class in 1972. In 1974, I earned the degree of Bachelor of Science in Electrical Engineeering. I worked in the computer industry my entire career, and retired from Hewlett-Packard in 2003. Part of my career was with the Ethernet development team at Digital Equipment Corporation in the early 1980s. I have been active in public safety aspects of Amateur Radio throughout my 50 years as a Commission licensee, and am currently a member of the Henderson County, NC Amateur Radio Emergency Service, and North Carolina AUXCOMM. The requirements for participation in the latter require successful completion of FEMA Independent Study courses pertaining to NIMS, ICS, and other emergency management topics.

3. Requirements and Expectations

When I became a licensee, it was instilled in me that the Amateur Radio Service exists because its licensees operate in the Public Interest, Convenience or Necessity. Further, we are encouraged and expected to prepare, and make available, ourselves to serve the public (and our governmental agencies at the local/county, state and federal level) in times of emergency. Further, we are also encouraged to make use of our spectrum to experiment so as to develop new technologies and operational techniques which would be beneficial to all, not some arbitrary commercial interest. In today's context, this could be termed "open source engineering", similar to the open source software development model that is so prevalent.

To that end, I have witnessed an explosion in new techniques over the past five decades, particularly in digital communications. Instead of relying on Baudot-code Radioteletype ("RTTY"), we are now able to transmit at somewhat higher data rates using ASCII and other 8-bit digital codes, and to use modem-like devices on the high-frequency (HF) bands allocated to us. However, I feel I (and other amateur licensees) are hampered in our public service efforts by the current digital transmission bandwidth requirements on the HF bands. I own an SCS PTC-II modem, and while it is somewhat usable on HF, its relatively slow data rate requires longer time overall to transmit a relatively simple message, particularly when operating during the difficult operating conditions that often accompany a natural disaster. As

a resident of an area frequented by hurricanes, I feel stymied by the fact that I cannot use Pactor-4 unless and until a Special Temporary Authorization is issued by the Commission. Hence, it has not been practical for me to invest in a newer, faster device, and would not be unless the Commission alters the Amateur Radio Service rules as proposed in these proceedings. The ability to transmit a given message at a faster data rate, and hence a shorter overall transmission time, would make those transmissions less susceptible to interference which would otherwise require a re-transmission of a message.

4. Security

Dr. Rappaport, in his filing, suggests that the use of the SCS Pactor modems represent some sort of encryption which leads to security issues. The Amateur Radio Service has a long history of self-policing and cooperation with the FCC in the US, and amateur radio licensees in other countries have demonstrated the same with their respective licensing authorities. There is a long and well-documented history of the use of radio-direction finding, and other techniques, by the amateur radio community to track down “intruders” misusing (deliberately or otherwise) frequencies allocated to the amateur radio service. Further, with the plethora of digital coding techniques that are available to amateurs, most of which were developed by the amateur radio community, there is a broad range of expertise that can be used to decode suspicious transmissions and, failing that, recognition of its characteristics for reporting to appropriate agencies in a rapid and useful manner. The ARSFI response details the technical aspects, but it should be reiterated that the Pactor protocols referenced by Dr. Rappaport are openly published and can be implemented at will by anyone with sufficient effort – it is not cryptography that deliberately obscures the nature or meaning of the messages. They are in daily use globally, and any misuse would be noticed very quickly.

5. Conclusion

It is in the public interest for the Commission to amend the Amateur Radio Service rules to permit digital bandwidth of 2.8kHz on the high-frequency amateur radio bands. This will permit amateurs to test and use faster modes, practice the necessary techniques and allow them to respond to emergencies and other events in a timely and efficient manner. It will also foster the development of new and better technologies, as well as expand the reservoir of experienced operators in this country, which has been the hallmark of the Amateur Radio Service for over a century.